

Notice of Allowability

Application No.

10/718,523

Examiner

Marc S. Zimmer

Applicant(s)

GLOCKNER ET AL.

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1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 06/13/06.
2. ☒ The allowed claim(s) is/are 1-30.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

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In the previous correspondence, the Examiner held various claims as being unpatentable over *Kunz* or *Eppie* in view of *Yokote* (JP '364). Applicant has traversed both of these statements of rejection on the foundation that the Examiner's statement of motivation is flawed. In particular, Applicant alleges that the reference does not, in fact, attribute stated excellent adhesion properties specifically to the incorporation of repeat units derived from dicidol into the polyester recited in the abstract. As an aside, the Examiner is treating the term dicidol as being equivalent to the different isomers of tricyclo (5.2.1.0^{2,6}] decane dimethanol (isomers meaning where the hydroxyl groups appear at different positions along the polycyclic framework).

The present Examiner acknowledges that at least the abstract is not clear as to what aspect of the invention taught by *Yokote* imparts the adhesion property and other desirable properties. This, of course, says nothing of whether the broader disclosure delineates the source of these properties. Ultimately, the present Examiner feels that whether or not *Yokote* offers a reasonable motivation to combine is of no consequence insofar as the Examiner agrees with Applicants' other assertion that their Specification illustrates an enhancement of multiple properties that seems to be plainly ascribable to the presence of the dicidol units in the polyester component, said enhancement not being predicted by the prior art. A more thorough demonstration of the effects of this structural unit would have been instructive but at least Applicant shows the effect of the incorporation of this monomer at relatively low levels, ca. 7 mol%, of incorporation.

In view of the above analysis, the Examiner believes that only an anticipatory reference is not overcome by the evidence of unexpected results already of record. In the course of surveying the prior art, the Examiner encountered several references that teach an invention bearing some resemblance to that of at least some of the claims. An evaluation of the most germane of these is presented *infra*.

Masabuchi et al., U.S. Patent Application Publication No. 2001/0041772

Masabuchi et al teach a composition (paragraphs 9-12) comprising a polyester, a modified olefin resin, and an elastomer material. A description of the modified olefin resin and its synthesis is provided in paragraphs 54-57. The synthetic approach entails copolymerizing glycidyl methacrylate with vinyl monomers or reacting the former with a polyolefin. This component may be equated with Applicant's glycidyl-containing polyacrylate. The polyester is one derived from an aromatic diacid, a "short chain" diol, and a "long chain" diol that is essentially telechelic hydroxy-terminated polyethylene oxide (paragraph 17). Cited among approximately 16 other glycols as an embodiment of the short-chain diol is tricyclodecane dimethanol (paragraphs 20 and 21), which is another name for dicitol. The relative amounts of dicitol and the polyethylene oxide in terms of their molar contribution to the total number of moles of alcohol is not expressly provided. Rather, it is disclosed in paragraph 39 that the hydroxy-terminated polyethylene oxide represents 20 to 90 wt.% as a fraction of the total weight of the alcohol. It is further stated in paragraph 38 that a preferred molecular weight of the

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polyethylene oxide macromonomer is between 1000 and 2000. If one were to consider an embodiment wherein the macromonomer had a molecular weight of 1,500 (exactly in the middle of the preferred range), its molecular weight contribution being 55 wt.% (which represents the midpoints of this preferred range also), and take into consideration that the hypothetical macromonomer had a molecular weight approximately 5 times that of tricyclodecane dimethanol, than it would be easy to calculate the mol contribution of this monomer as approximately $55/5 = 11$ mol%, which is within the range stipulated by the claim.

Nevertheless, it is the opinion of the Examiner that, although this reference would seem to represent a sound foundation for a rejection under 35 U.S.C. 103, it does not properly anticipate the patent claims because, to arrive at an anticipation, (i) tricyclodecane dimethanol would have to be selected as the short-chain diol in lieu of numerous other embodiments and (ii) a plurality of assumptions concerning the molecular weight of the long-chain diol and its weight contribution to the total of the polyols are needed.

Shiga et al., U.S. Patent # 7,084

Shiga et al. disclose a composition comprising, among other things, an amorphous polyester and a reactive compound (column 3, lines 29-35). Examples of the reactive compound according to column 8, lines 31-33 include a styrene/methylmethacrylate/glycidyl methacrylate terpolymer which may be equated with

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component (II) of the instant invention. A comprehensive description of the polyester is outlined in columns 4 and 5 with dozens of specific polymers being mentioned. It is further contemplated in column 5, lines 28-39 that various other polyols may be employed in the preparation of the polyesters as alternatives to the 6 preferred monomers (column 5, lines 28-30) from which all of the specific polyester compounds are derived. Among these is included tricyclodecanedimethanol. Implicit in the description is the fact that this monomer can be used with other glycols but there is no indication of what molar ratio the tricyclodecanedimethanol is to be used in were it to be selected as a monomer. Because (i) there are no polyesters mentioned that are derived from tricyclodecanedimethanol alone or in combination with another glycol and (ii) there is no suggestion as to what mol ratios of tricyclodecanedimethanol and a second glycol should be used, the Examiner is of the opinion that this reference, likewise, does not represent an anticipation but, rather, a strong foundation for a rejection under 35 U.S.C. 103.

It is appreciated that the Examiner did not address the limitation set forth in the final three lines of claim 1 in his analysis of the validity of the claims. This is because the limitation stipulated therein is a process limitation within the confines of a product claim. Each of the references cited above teaches separately preparing the epoxy-functional vinyl polymer and then adding it to the polyester but it was believed that this was not a patentable distinction insofar as the products ostensibly are the same

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whether the vinyl polymer is prepared *in situ* or prior to its combination with the polyester.

No other issues remain hence claims 1-30 are deemed allowable.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc S. Zimmer whose telephone number is 571-272-1096. The examiner can normally be reached on Monday-Friday 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

August 9, 2006

Marc S. Zimmer
MARC S. ZIMMER
PRIMARY EXAMINER